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Lionel J. Milberger

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10/03/2008

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EXAMINER

RIPLEY, JAY R

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/526,947	Applicant(s) MILBERGER, LIONEL J.	
	Examiner JAY R. RIPLEY	Art Unit 3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 15-18, 20-23, 25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 15-18, 20-23, 25 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/15/2005</u> . | 6) <input checked="" type="checkbox"/> Other: <u>ATTACHMENT A</u> . |

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DETAILED ACTION

Election/Restrictions

Claims 8-14, 19, and 24 cancelled by Applicant in the reply filed 08/02/2007, the noted reply in response to the requirement for Election/Restriction Requirement mailed 12/28/2006, as apparently being drawn to a nonelected species, the species not shown in original Figures 1-3. Election was made **without** traverse in the reply filed on 05/09/2008.

Priority

Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) to U.S. Provisional Application Serial No. 60/409092 is acknowledged.

Information Disclosure Statement

The information disclosure statement (IDS) filed 08/15/2005 was considered by the examiner.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the structure of the recitation of "the tie-back body and the riser each formed from a metallic material" as recited in claims 1, 17, 18,

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and 20 (lines 8-9, lines 12-13, line 10, and lines 11-12, respectively) must be shown or the feature(s) canceled from the claim(s). The Examiner notes that the proper crosshatching depicting a metal is evenly spaced lines and not the instant drawings' evenly spaced pairs of lines as observed in original Figures 1-3. No new matter should be entered.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the structure of the recitation of "an insulator for electrically insulating between the tie-back body and the riser flange" as recited in claim 4, lines 1-3, must be shown or the feature(s) canceled from the claim(s). The Examiner notes that the "sandwich flange" identified by reference numeral "134" and the "bent insulating ring" identified by reference numeral "34" are disclosed as being "of an electrical insulating material" in page 4, lines 26-30, and page 6, lines 1-2, of the original specification, respectively; however, the material representative crosshatching of the noted parts in original Figures 2 and 3 fails to indicate an electrically insulating material. No new matter should be entered.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the structure of the recitation of "wherein the insulator comprises: an insulation ring between the tie-back body and the riser flange" as recited in claim 5, lines 1-3, must be shown or the feature(s) canceled from the claim(s). The Examiner notes that the "sandwich flange" identified by reference numeral "134" and the "bent insulating ring" identified by reference numeral "34" are disclosed as being "of an electrical insulating material" in page 4, lines 26-30, and page 6, lines 1-2, of the original specification, respectively; however, the material representative crosshatching of the noted parts

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in original Figures 2 and 3 fails to indicate an electrically insulating material. No new matter should be entered.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the structure of the recitation of "wherein the insulator comprises: one or more insulation washers positioned between a corresponding one or more threaded members joining the riser flange with the tie-back body flange" as recited in claim 6, lines 2-4, must be shown or the feature(s) canceled from the claim(s). The Examiner notes that the "insulation washers" identified by reference numeral "38" do not have material representative crosshatching to indicate an electrically insulating material. No new matter should be entered.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the structure of the recitation of "the sandwich flange comprising an insulating material for electrically insulating between the riser flange and one or more of the tubular tie-back body and the tie-back body flange" as recited in claim 18, lines 19-20, must be shown or the feature(s) canceled from the claim(s). The Examiner notes that the "sandwich flange" identified by reference numeral "134" is disclosed as being "of an electrical insulating material" in page 6, lines 1-2, of the original specification; however, the material representative crosshatching of the noted part in original Figures 3 fails to indicate an electrically insulating material. No new matter should be entered.

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The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the structure of the recitation of "a wellhead engagement structure at the first axial of the body and riser connection structure at the second axial end of the tubular body" as recited in claim 20, lines 7-8, must be shown or the feature(s) canceled from the claim(s). It appears to the Examiner that no "wellhead engagement structure" or "riser connection structure" is shown in any of the original figures. No new matter should be entered.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the structure of the recitation of "an electrical insulating material carried at the second axial end of the tubular connection body for electrically insulating the tubular connection body from the riser" as recited in claim 20, lines 16-18, must be shown or the feature(s) canceled from the claim(s). As noted above, none of the structures that are disclosed as "electrically insulating" show crosshatching indicative of such a material. No new matter should be entered.

The drawings are objected to because the "tie-back body", part 16, in original Figure 1 lacks appropriate material representative crosshatching.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure

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must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7, 15-18, 20-23, 25, and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claim 1, it is recited in lines 6-10, "a tie-back flange assembly having first and second flanges, with the first body flange having a connection for separable connection to an axial end of the tie-back body and the second riser flange for connecting to the riser... the riser and the riser flange being removable from the body flange, and the body flange" (emphasis added). The limitations emphasized limitations of "the first body flange", "the second riser flange", "the riser flange", and "the body flange" lack sufficient antecedent basis for the limitations in the claim. It appears that the "first body flange" is intended to be the "first flange"

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of the "tie-back flange assembly". Similarly, it appears the "second riser flange" is intended to be the "second flange" of the "tie-back flange assembly". If such is the Applicant's intent, then Applicant should amend the claim language to make such intention clear and to consistently use the same phrase to denote the same structural component throughout the claim. The Examiner notes that the phrase "the riser flange" is also found in dependent claim 25.

In regard to claim 1, there is an inconsistency between the language in the preamble and certain portions in the body of the claim, thereby making the scope of the claim unclear. The preamble in claim 1 clearly indicates that a subcombination is being claimed, e.g., "An apparatus for connecting a riser to a subsea wellhead assembly ". This language would lead the examiner to believe that the Applicant intends to claim only the subcombination of an apparatus, the riser being only functionally recited. This presents no problem as long as the body of the claim also refers to the functionality, such as, "for attachment to the". The problem arises when the riser is positively recited within the body of the claim, such as "the tie-back body and the riser each formed from a metallic material, the riser and the riser flange being removable from the body flange" in lines 8-10. There is an inconsistency within the claim; the preamble indicates the subcombination, while in at least one instance in the body of the claim there is a positive recital of structure indicating that the combination of an apparatus and riser are being claimed. The examiner cannot be sure if applicant's intent is to claim merely the apparatus or the apparatus in combination with the riser. Applicant is required to clarify what the claims are intended to be drawn to, i.e., either the apparatus alone or the combination of the apparatus with the riser. Applicant should make the language of the claim consistent with applicant's intent. In

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formulating a rejection on the merits, the examiner is considering that the claims are drawn to the combination and the claims will be rejected accordingly.

In regard to claim 3, lines 1-2, it is recited "wherein the tie-back body and the riser flange are of dissimilar materials" (emphasis added). It is unclear as to what constitutes the Applicant intends the phrase "dissimilar materials" to encompass. It is readily apparent that a steel material is dissimilar to a rubber material. However, since any two melts of a metal will invariably have some relatively minor constituent element variance, two lots of metal stock, each made from different melts, can also be considered to be of "dissimilar materials". Applicant should remark in the reply to this Office action what the phrase "dissimilar materials" is intended to constitute.

In regard to claim 6, it is recited in lines 3-4, "one or more insulation washers positioned between a corresponding one or more threaded members joining the riser flange with the tie-back body flange" (emphasis added). It is unclear as to what structure the "one or more insulation washers" are "between" in relation to the "one or more threaded members joining the riser flange with the tie-back body flange".

In regard to claim 17, it is recited in lines 18-19, "an electrical insulation material separating the different materials of the tie-back connector and the riser flange" (emphasis added). There is a lack of clarity since not all of the components of "different materials" can be determined. The Examiner notes that claim 17 is an "open claim", i.e., "comprising", and, further, the structure of the "tie-back connector" is also "open" due to the claim 17, lines 3-4, of "the tie-back connector including an elongate tubular tie-back body and a connector assembly radially outward of the tubular body" (emphasis added). As such, it is unclear as to the full scope of the limitation of "different materials of the tie-back connector and the riser flange".

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Further, there is no recitation in claim 17 placing the limitation of the “tie-back connector and the riser flange” are of different materials.

In regard to claim 17, there is an inconsistency between the language in the preamble and certain portions in the body of the claim, thereby making the scope of the claim unclear. The preamble in claim 17 clearly indicates that a subcombination is being claimed, e.g., “An Apparatus for connecting a riser to a subsea wellhead assembly”. This language would lead the examiner to believe that the Applicant intends to claim only the subcombination of an apparatus, the riser being only functionally recited. This presents no problem as long as the body of the claim also refers to the functionality, such as, “for attachment to the”. The problem arises when the riser is positively recited within the body of the claim, such as “the tie-back body flange comprising different materials than materials comprising the riser; a riser flange connected to one axial end of the riser” in lines 8-10. There is an inconsistency within the claim; the preamble indicates the subcombination, while in at least one instance in the body of the claim there is a positive recital of structure indicating that the combination of an apparatus and riser are being claimed. The examiner cannot be sure if applicant's intent is to claim merely the apparatus or the apparatus in combination with the riser. Applicant is required to clarify what the claims are intended to be drawn to, i.e., either the apparatus alone or the combination of the apparatus with the riser. Applicant should make the language of the claim consistent with applicant's intent. In formulating a rejection on the merits, the examiner is considering that the claims are drawn to the combination and the claims will be rejected accordingly.

In regard to claim 18, it is recited in lines 6-9, “a tie-back flange assembly having first and second flanges, with the first body flange having a connection for separable connection to an

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axial end of the tie-back body and the second riser flange having a mating face for connecting to a riser” (emphasis added). The emphasized claim limitations lack proper antecedent basis.

In regard to claim 18, there is an inconsistency between the language in the preamble and certain portions in the body of the claim, thereby making the scope of the claim unclear. The preamble in claim 18 clearly indicates that a subcombination is being claimed, e.g., “Apparatus for connecting a riser to a subsea wellhead assembly”. This language would lead the examiner to believe that the Applicant intends to claim only the subcombination of an apparatus, the riser being only functionally recited. This presents no problem as long as the body of the claim also refers to the functionality, such as, “for attachment to the”. The problem arises when the riser is positively recited within the body of the claim, such as “the tie-back body and the riser each formed from a metallic material; a riser flange mechanically connected to the riser” in lines 10-11. There is an inconsistency within the claim; the preamble indicates the subcombination, while in at least one instance in the body of the claim there is a positive recital of structure indicating that the combination of an apparatus and riser are being claimed. The examiner cannot be sure if applicant's intent is to claim merely the apparatus or the apparatus in combination with the riser. Applicant is required to clarify what the claims are intended to be drawn to, i.e., either the apparatus alone or the combination of the apparatus with the riser. Applicant should make the language of the claim consistent with applicant's intent. In formulating a rejection on the merits, the examiner is considering that the claims are drawn to the combination and the claims will be rejected accordingly.

In regard to claim 20, it is recited in lines 6-7, “a connector assembly radially outward of the tubular body” (emphasis added). It is unclear as to which “tubular body” the noted recitation

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is drawn to; the “an elongate, tubular connection body” as recited in claim 20, line 3, or the “an elongate tubular tie-back body” as recited in claim 20, line 5.

In regard to claim 20, it is recited in line 7, “a wellhead engagement structure at the first axial of the body” (emphasis added). There is a lack of antecedent basis for the limitation of “the first axial of the body”. Further, it is unclear as to which “body” is the limitation drawn to, i.e. the “tubular connection body” as recited in line 3 of claim 20 or the “tubular tie-back body” as recited in line 5 of claim 20.

In regard to claim 20, the limitation “the body flange” is recited in line 17. There is insufficient antecedent basis for this limitation in the claim. The noted “body flange” appears to be the previously recited in claim 20, line 9, “tie-back body flange”. The Examiner notes that claims 22 and 23 further recite “the body flange”.

In regard to claim 20, there is an inconsistency between the language in the preamble and certain portions in the body of the claim, thereby making the scope of the claim unclear. The preamble in claim 20 clearly indicates that a subcombination is being claimed, e.g., “A connection structure for securing a riser to a subsurface wellhead assembly”. This language would lead the examiner to believe that the Applicant intends to claim only the subcombination of a connection structure, the riser being only functionally recited. This presents no problem as long as the body of the claim also refers to the functionality, such as, “for attachment to the”. The problem arises when the riser is positively recited within the body of the claim, such as “the tie-back body and the riser each formed from a metallic material, the riser being removable from a tie-back body flange at an upper end of the tie-back body,” in lines 11-13. There is an inconsistency within the claim; the preamble indicates the subcombination, while in at least one

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instance in the body of the claim there is a positive recital of structure indicating that the combination of connection structure and riser are being claimed. The examiner cannot be sure if applicant's intent is to claim merely the connection structure or the connection structure in combination with the riser. Applicant is required to clarify what the claims are intended to be drawn to, i.e., either the connection structure alone or the combination of the connection structure with the riser. Applicant should make the language of the claim consistent with applicant's intent. In formulating a rejection on the merits, the examiner is considering that the claims are drawn to the combination and the claims will be rejected accordingly.

In regard to claim 20, it is recited in lines 12-13, "a tie-back body flange". In claim 20, line 9, it is recited "a tie-back body flange". It is unclear if the recited "tie-back body flange" are intended to be the same structure or if the recited "tie-back body flange" structures are intended to be two separate, different structures. The Examiner notes that only one such structure is disclosed in the original specification.

In regard to claim 25, it is recited in lines 1-4, "wherein the electrical insulation material comprises: one or more insulation washers positioned between the tie-back body and the riser flange". It is unclear to the Examiner as to how a "material" can "comprise" physical structures, i.e., washers.

In regard to claim 26, it is recited in lines 1-3, "wherein the electrical insulating material electrically insulating the riser flange from the tie-back body flange". It is unclear to the Examiner what precisely the recitation of claim 26 is intended to be, since the sentence appears unfinished.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

As best understood, claims 1, 2, 7, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caldwell et al (U.S. 2,752,579) in view of Pearce et al (U.S. 4,703,677).

In regard to claims 1, 2, 7, and 15, Caldwell et al disclose an apparatus for connecting a riser to a subsea wellhead assembly, comprising:

a tie-back connector (the embodiment shown in Figure 2, see Attachment A) for connection to the wellhead assembly, the connector including an elongate tubular tie-back body (18 as observed in Figure 2, see Attachment A); and

a tie-back flange assembly (the flange and associated pipes are the assembly as shown in Figure 2, see Attachment A) having first and second flanges (noted in Figure 2, see Attachment A), with the first body flange having a connection (the respective threads as observed in Figure 2, see Attachment A) for separable connection to an axial end of the tie-back body (all pipes can be the to have “axial ends”) and the second riser flange (noted in Figure 2, see Attachment A) for connecting to the riser, the tie-back body and the riser each formed from a metallic material (see column 1, second paragraph), the riser and the riser flange being removable from the body flange (the noted constituent elements are fastened together via bolts 3 and nuts 14 as observed in Figure 2, see Attachment A, and the Examiner notes that the term

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“removable” encompasses destructive removal), and the body flange being removable from the tie-back body (via the respective threads as observed in Figure 2, see Attachment A);

the riser flange mechanically connected to the riser (via the respective threads as observed in Figure 2, see Attachment A), the riser flange having a mating face (the surface of the “2nd flange” that contacts part 11) for engagement with the tie-back body flange (the Examiner notes that the term “engagement” does not require direct contact); and

a securing structure (bolts 3 and nuts 14 as observed in Figure 2, see Attachment A) for removably securing the riser flange to the tie-back body flange at their mating faces;

a threaded connection between the tie-back body flange and the tie-back body (as observed in Figure 2, see Attachment A, there are threads that connect the noted “2nd flange” to the “riser”);

a seal member (part 11 as observed in Figure 2, see Attachment A) for sealing between the riser flange and the tubular tie-back body.

Caldwell et al disclose the claimed invention of an apparatus for connecting except for a connector assembly radially outward of the tubular tie-back body. The invention of Caldwell et al is intended for use in “oil well flow lines” (column 2, lines 54-58) and teach that it is “customary to insulate flanges in ferrous metal well systems” (column 2, lines 58-59).

Pearce et al teach a method and system for maintenance and servicing of subsea wells, subsea well systems including oil well flow lines, and that it is known that bolted flanges are used in association with tie-back tools (see Pearce et al Figure 5 in U.S. 4,730,677), wherein a bolted flanged connection (part 101) of tie-back fluid flow passageways (part 103), i.e., “tubular tie-

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back body", are radially surrounded by is a "tieback tool" (part 101), i.e., a "connector assembly". As such, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the apparatus for connecting of Caldwell et al in a subsea well system for connecting tie-back fluid flow passageways as taught by Pearce et al to be known and thereby provide a connector assembly structure radially outward of the tubular tie-back body.

As best understood, claims 3-6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caldwell et al (U.S. 2,752,579) view of Pearce et al (U.S. 4,7030,677) as applied to claims 1, 2, 7, and 15 above, and further in view of Schutz et al (U.S. 2002/0070024).

In regard to claims 3-6 and 16, Caldwell et al further disclose:

an insulator (parts 11, 12, and 15 as observed in Figure 2, see Attachment A) for electrically insulating between the tie-back body and the riser flange;

wherein the insulator comprises: an insulation ring between the tie-back body and the riser flange (part 11 as observed in Figure 2, see Attachment A);

wherein the insulator comprises: one or more insulation washers (parts 16 as observed in Figure 2, see Attachment A) positioned between a corresponding one or more threaded members (the threads of bolts 3, as observed in Figure 2, see Attachment A) joining the riser flange with the tie-back body flange.

Caldwell et al view of Pearce et al provide for the claimed invention except for the tie-back body and the riser flange are of dissimilar materials and the tie-back body is a low alloy steel and the riser flange is a titanium alloy. Schutz et al teaches a mounting system for offshore

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structural members and further teach that “While typically the riser strings are constructed of steel, in an attempt to reduce hang-off loads and/or diminish static and cyclic bending stresses, as well as transmitted moments that generally increase with riser size and/or wave action, titanium alloy components are being incorporated into the riser strings” (column 1, paragraph 0004, lines 9-14). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the constituent components of the apparatus for connecting provided by Caldwell et al view of Pearce et al of steel and titanium, including such a combination as the tie-back body being made of a low alloy steel and the riser flange being made of a titanium alloy, since it is taught by Schutz et al that titanium alloy components are being incorporated into typically steel riser strings, i.e., oil well flow lines.

Further in regard to claims 3-6 and 16, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the constituent components of the apparatus for connecting provided by Caldwell et al view of Pearce et al, including such a combination as the tie-back body being made of a low alloy steel and the riser flange being made of a titanium alloy, to take advantage of the material properties of the known materials of low alloy steel and titanium alloy, e.g., strength to weight ratios, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

As best understood, claims 17 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caldwell et al (U.S. 2,752,579) in view of Pearce et al (U.S. 4,703,677) and further in view of Schutz et al (U.S. 2002/0070024) as applied to claims 1-7, 15, and 16, above.

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In regard to claims 17 and 25, Caldwell et al (U.S. 2,752,579) disclose an Apparatus for connecting a riser to a subsea wellhead assembly, comprising:

a tie-back connector for connection to the wellhead assembly, the tie-back connector including an elongate tubular tie-back body (as observed in Figure 2, see Attachment A);

a tie-back body flange (noted as “1st flange” in figure 2, see Attachment A) mechanically connected to the tie-back body (via the respective threads as observed in Figure 2, see Attachment A), the tie-back body flange having a mating face facing upwardly from the tie-back connector (the flange has a “mating face” facing the noted “2nd flange” as observed in Figure 2, see Attachment A) for connecting to the riser;

a riser flange (noted as “2nd flange” in Figure 2, see Attachment A) connected to one axial end of the riser (all pipes can be the to have “axial ends” and an end is attached to the noted “2nd flange”, see Attachment A), the riser flange having a mating face (the flange has a “mating face” facing the noted “1st flange” as observed in Figure 2, see Attachment A) facing away from the riser, for mating with the mating face of the tie-back body flange, the tie-back body and the riser each formed from a metallic material (see column 1, second paragraph), the riser and the riser flange being removable from the body flange (the noted constituent parts are bolted together, see Figure 2, in Attachment A - the Examiner notes that the term “removable” encompasses destructive remove and, as such, anything is “removable” in relation to anything else), and the body flange being removable from the tubular body (via the observed threads in Figure 2, see Attachment A - the Examiner notes that the term “removable” encompasses destructive remove and, as such, anything is “removable” in relation to anything else for insertion or removal of the connector assembly on the tubular body;

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a threaded connection between the tie-back body flange and the tie-back body (the threads are observed in Figure 2, see Attachment A); and

an electrical insulation material separating the tie-back connector and the riser flange (the material of parts 11, 12, 16, and 17 as observed in Figure 2, see Attachment A);

wherein the electrical insulation material comprises: one or more insulation washers positioned between the tie-back body and the riser flange (Caldwell et al teach in column 2, lines 40-43, that part 70 may be used in lieu of part 11 and part 70 comprises two insulation washers 72).

Caldwell et al disclose the claimed invention a connector assembly radially outward of the tubular body of the tie-back body. The invention of Caldwell et al is intended for use in "oil well flow lines" (column 2, lines 54-58) and teach that it is "customary to insulate flanges in ferrous metal well systems" (column 2, lines 58-59). Pearce et al teach a method and system for maintenance and servicing of subsea wells, subsea well systems including oil well flow lines, and that it is known that bolted flanges are used in association with tie-back tools (see Pearce et al Figure 5 in U.S. 4,730,677), wherein a bolted flanged connection (part 101) of tie-back fluid flow passageways (part 103), i.e., "tubular tie-back body", are radially surrounded by is a "tieback tool" (part 101), i.e., a "connector assembly". As such, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the apparatus for connecting of Caldwell et al in a subsea well system for connecting tie-back fluid flow passageways as taught by Pearce et al to be known and thereby provide a connector assembly structure radially outward of the tubular tie-back body.

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Caldwell et al view of Pearce et al provide for the claimed invention except for the tie-back body flange comprising different materials than materials comprising the riser. Schutz et al teaches a mounting system for offshore structural members and further teach that “While typically the riser strings are constructed of steel, in an attempt to reduce hang-off loads and/or diminish static and cyclic bending stresses, as well as transmitted moments that generally increase with riser size and/or wave action, titanium alloy components are being incorporated into the riser strings” (column 1, paragraph 0004, lines 9-14). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the constituent components of the apparatus for connecting provided by Caldwell et al view of Pearce et al of different materials, including such a combination as the tie-back body flange comprising different materials than materials comprising the riser, since it is taught by Schutz et al that titanium alloy components are being incorporated into typically steel riser strings, i.e. oil well flow lines, and titanium and steel are different materials.

Further in regard to claims 3-6 and 16, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the constituent components of the apparatus for connecting provided by Caldwell et al view of Pearce et al, including such a combination as the tie-back body flange comprising different materials than materials comprising the riser, to take advantage of the material properties of known materials, e.g., different modulus of elasticity, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

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As best understood, claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Caldwell et al (U.S. 2,752,579) in view of Pearce et al (U.S. 4,7030,677) as applied to claims 1-7, 15-17, and 25, above.

In regard to claim 18, Caldwell et al disclose an apparatus for connecting a riser to a subsea wellhead assembly, comprising:

a tie-back connector for connection to the wellhead assembly, the tie-back connector including an elongate tubular tie-back body (noted in Figure 2, see Attachment A);

a tie-back flange assembly having first and second flanges (the assembly and respective flanges observed in Figure 2, see Attachment A), with the first body flange having a connection (the threads as observed in Figure 2, see Attachment A) for separable connection to an axial end of the tie-back body (all pipes can be the to have "axial ends" and an end is attached to the noted "1st flange", see Attachment A) and the second riser flange having a mating face for connecting to a riser (the threaded face of the noted "2nd flange" observed in Figure 2, see Attachment A);

the tie-back body and the riser each formed from a metallic material (see column 1, second paragraph);

a riser flange mechanically connected to the riser (via the observed thread of the respective flange as observed in Figure 2, see Attachment A), the riser flange having a mating face (the flange has a "mating face" facing the noted "2nd flange" as observed in Figure 2, see Attachment A) facing downwardly from the riser, the riser and the riser flange being removable from the body flange (the noted constituent parts are bolted together, see Figure 2, in Attachment A - the Examiner notes that the term "removable" encompasses destructive remove and, as such, anything is "removable" in relation to anything else), and the body flange being removable from

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the tie-back body (via the observed threads in Figure 2, see Attachment A - the Examiner notes that the term "removable" encompasses destructive remove and, as such, anything is "removable" in relation to anything else) for insertion or removal of the connector assembly on the tie-back body;

a threaded connection between the tie-back body flange and the tie-back body (as observed in Figure 2, see Attachment A);

a sandwich flange (part 11 as observed in Figure 2, see Attachment A) for positioning between the mating faces of the tie-back body flange and the riser flange, the sandwich flange comprising an insulating material (see column 1, actual lines 36-53) for electrically insulating between the riser flange and the tie-back body flange; one or more threaded members (bolts 3 as observed in Figure 2, see Attachment A) passing through and joining the sandwich flange, the riser flange, and the tie-back body flange; and one or more insulation washers (parts 15 as observed in Figure 2, see Attachment A) positioned between a corresponding one or more threaded members joining the riser flange with the tie-back body flange.

Caldwell et al disclose the claimed invention a connector assembly radially outward of the tubular body of the tie-back body. The invention of Caldwell et al is intended for use in "oil well flow lines" (column 2, lines 54-58) and teach that it is "customary to insulate flanges in ferrous metal well systems" (column 2, lines 58-59). Pearce et al teach a method and system for maintenance and servicing of subsea wells, subsea well systems including oil well flow lines, and that it is known that bolted flanges are used in association with tie-back tools (see Pearce et al Figure 5 in U.S. 4,730,677), wherein a bolted flanged connection (part 101) of tie-back fluid flow passageways (part 103), i.e., "tubular tie-back body", are radially surrounded by is a

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“tieback tool” (part 101), i.e., a “connector assembly”. As such, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the apparatus for connecting of Caldwell et al in a subsea well system for connecting tie-back fluid flow passageways as taught by Pearce et al to be known and thereby provide a connector assembly structure radially outward of the tubular tie-back body.

As best understood, claims 20-23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caldwell et al (U.S. 2,752,579) in view of Pearce et al (U.S. 4,7030,677) as applied to claims 1-7, 15-18, and 25, above.

In regard to claims 20-23 and 26, Caldwell et al connection structure for securing a riser to a subsurface wellhead assembly, comprising:

- an elongate, tubular connection body (noted as the “RISER” in Figure 2, see Attachment A) having first and second axial ends (all pipe can be the to have “axial ends”);

- a tie-back connector for connection to the wellhead assembly, the connector including an elongate tubular tie-back body (as observed in Figure 2, see Attachment A);

- a wellhead engagement structure at the first axial of the body and riser connection structure at the second axial end of the tubular body (the “axial end” structure of the noted “RISER” pipe meets the claims limitations of a “wellhead engagement structure” and a “riser connection structure”, since no specific structure is recited and any surface can be interpreted as a “connection structure”);

- a tie-back body flange mechanically connected to the tie-back body (as observed in Figure 2, see Attachment A, the noted “1st flange” and the respective threads of the flange), the

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tie-back body flange having a mating face facing upwardly from the connector assembly (the "face" of the flange directed towards the other of the two flanges shown in Figure 2, see Attachment A) for connecting to the riser, the tie-back body and the riser each formed from a metallic material (see column 1, second paragraph), the riser being removable from a tie-back body flange at an upper end of the tie-back body (via the respective threads as observed in Figure 2, see Attachment A - the Examiner notes that the term "removable" encompasses destructive remove and, as such, anything is "removable" in relation to anything else), and the body flange being removable from the tie-back body (via the respective threads as observed in Figure 2, see Attachment A - the Examiner notes that the term "removable" encompasses destructive remove and, as such, anything is "removable" in relation to anything else) for insertion or removal of the connector assembly on the tie-back body; and

an electrical insulating material (part 11 as observed in Figure 2, see Attachment A) carried at the second axial end of the tubular connection body for electrically insulating the tubular connection body from the riser;

wherein the riser comprises a flange at an axial end of the riser (the flange noted as "2nd flange" in Figure 2, see Attachment A);

wherein the electrical insulating material is carried on the body flange (the insulating part 11 is in contact with the "body flange" noted as "1st flange" and is therefore "carried" by the flange);

wherein the body flange is threadably engaged to the tubular connection body (as observed in Figure 2, see Attachment A, the noted flanges are connected to their respective structures by threads);

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wherein the electrical insulating material electrically insulating the riser flange from the tie-back body flange (as noted in the above 35 U.S.C. § 112, second paragraph rejection, the intention of this claim 26 limitation is unclear).

Caldwell et al disclose the claimed invention a connector assembly radially outward of the tubular body of the tie-back body. The invention of Caldwell et al is intended for use in "oil well flow lines" (column 2, lines 54-58) and teach that it is "customary to insulate flanges in ferrous metal well systems" (column 2, lines 58-59). Pearce et al teach a method and system for maintenance and servicing of subsea wells, subsea well systems including oil well flow lines, and that it is known that bolted flanges are used in association with tie-back tools (see Pearce et al Figure 5 in U.S. 4,730,677), wherein a bolted flanged connection (part 101) of tie-back fluid flow passageways (part 103), i.e., "tubular tie-back body", are radially surrounded by is a "tieback tool" (part 101), i.e., a "connector assembly". As such, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the apparatus for connecting of Caldwell et al in a subsea well system for connecting tie-back fluid flow passageways as taught by Pearce et al to be known and thereby provide a connector assembly structure radially outward of the tubular tie-back body.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAY R. RIPLEY whose telephone number is (571)272-7535. The examiner can normally be reached on Monday through Friday, 1:30 P.M. - 10:00 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jay R Ripley/
Examiner, Art Unit 3679
30 September 2008

/Daniel P. Stodola/
Supervisory Patent Examiner, Art Unit 3679